

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. – 21. (cancelled)

22. (currently amended) [[A]] An in-mold process for the production of a synthetic resin composite material with a polyurethane gel coat, wherein the process comprises

(i) mixing a polyol component (A) and a polyisocyanate component (B) and at least partially curing the resultant mixture to form a gel coat material; ~~and~~

(ii) introducing the gel coat material into a mold; and

~~(ii)~~ (iii) contacting the gel coat material with applying a synthetic resin that comprises at least one of an epoxy resin and a vinyl ester resin onto the gel coat material, the synthetic resin being not, or at least not completely cured at the time it is contacted with the gel coat material and the gel coat material being not completely cured at the time it is contacted with the synthetic resin;

and wherein

polyol component (A) is a mixture that comprises (i) one or more polyols and (ii) one or more aromatic amines, and comprises from 0.5 to 10 mol of hydroxyl groups per kg of component (A); and polyisocyanate component (B) comprises one or more aromatic polyisocyanates.

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23. (previously presented) The process of claim 22, wherein the gel coat material displays an elongation at break at 23°C, measured according to DIN EN ISO 527, of at least 3%.

24. (cancelled)

25. (cancelled)

26. (previously presented) The process of claim 22, wherein the synthetic resin comprises one or more reinforcing materials.

27. (previously presented) The process of claim 26, wherein the one or more reinforcing materials comprise one or more of a glass fiber fabric, a glass fiber nonwoven, a carbon fiber fabric, and a carbon fiber bonded fabric.

28. (previously presented) The process of claim 22, wherein component (A)(i) comprises one or more polyether polyols.

29. (previously presented) The process of claim 22, wherein component (A)(i) comprises at least one of (A1) one or more low molecular weight polyols having a molecular weight of from 150 to 600 g/mol and from 4 to 20 mol of hydroxyl groups per kg of low molecular weight polyol(s), and (A2) one or more higher molecular weight polyols.

30. (previously presented) The process of claim 22, wherein an aromatic amine of component (A)(ii), as a 20 wt.% solution in toluene, mixed at 23°C with an equimolar quantity of an oligomeric HDI isocyanate having an NCO content of about 5.2 mol/kg and a viscosity of from 2,750 to 4,250 mPas, as a 80 wt.% solution in toluene, affords a gel time, determined according to E-DIN VDE 0291-2, 1997-06, section 9.2.1., of more than 30 seconds.

31. (previously presented) The process of claim 22, wherein the one or more aromatic amines of component (A)(ii) comprise at least one methylenebis(aniline).

32. (previously presented) The process of claim 31, wherein the at least one methylenebis(aniline) comprises 4,4'-methylenebis-(3-chloro-2,6-diethylaniline).

33. (previously presented) The process of claim 22, wherein component (A) comprises from 0.1 to 20 wt.% of the one or more aromatic amines, based on a total weight of components (A)(i) and (A)(ii).

34. (previously presented) The process of claim 29, wherein component (A) comprises from 2 to 70 wt.% of component (A1), based on a total weight of components (A)(i) and (A)(ii).

35. (previously presented) The process of claim 34, wherein component (A) comprises from 5 to 60 wt.% of component (A1).

36. (previously presented) The process of claim 29, wherein component (A1) comprises from 4.5 to 15 mol of hydroxyl groups of per kg of component (A1).

37. (previously presented) The process of claim 29, wherein component (A1) comprises one or more polyols selected from straight-chain and branched polyester polyols, polyether polyols, acrylate polyols, and polyols based on dimeric fatty acids.

38. (previously presented) The process of claim 29, wherein component (A2) comprises one or more polyols selected from polyester polyols, polyether polyols, acrylate polyols, and polyols based on dimeric fatty acids.

39. (previously presented) The process of claim 29, wherein component (A) comprises from 75 to 10 wt. % of component (A2), based on a total weight of components (A)(i) and (A)(ii).

40. (previously presented) The process of claim 22, wherein polyisocyanate component (B) comprises one or more of a monomeric, oligomeric or polymeric polyisocyanate.

41. (previously presented) A synthetic resin composite material with a polyurethane gel coat, wherein the composite material is obtained by the process of claim 22.

42. (previously presented) The composite material of claim 41, wherein the composite material is in a form of a rotor vane for a wind power plant, or a part thereof.

43. (cancelled)

44. (new) An in-mold process for the production of a synthetic resin composite material with a polyurethane gel coat, wherein the process comprises

(i) mixing a polyol component (A) and a polyisocyanate component (B) and at least partially curing the resultant mixture to form a gel coat material;

(ii) introducing the gel coat material into a mold; and

(iii) applying a synthetic resin that comprises at least one of an epoxy resin and a vinyl ester resin onto the gel coat material, the synthetic resin being not, or at least not completely cured at the time it is contacted with the gel coat material and the gel coat material being not completely cured at the time it is contacted with the synthetic resin;

and wherein

polyol component (A) is a mixture that comprises (i) one or more polyols and (ii) one or more aromatic amines, and comprises from 0.5 to 10 mol of hydroxyl groups per kg of component (A);

and polyisocyanate component (B) comprises one or more aromatic polyisocyanates;

component (A) comprising from 0.1 to 20 wt.% of the one or more aromatic amines, based on a total weight of components (A)(i) and (A)(ii), and component (A)(i) comprising at least one of

(A1) one or more low molecular weight polyols having a molecular weight of from 150 to 600 g/mol and from 4 to 20 mol of hydroxyl groups per kg of low molecular weight polyol(s), and

(A2) one or more higher molecular weight polyols.

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45. (new) The process of claim 44, wherein component (A) comprises from 2 to 70 wt.% of component (A1), based on a total weight of components (A)(i) and (A)(ii).

46. (new) The process of claim 45, wherein component (A) comprises from 5 to 60 wt.% of component (A1).